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Method for quality control in ultrasonic welding and associated apparatus

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Abstract

In ultrasonic welding, it is known to detect significant welding parameters and compare them with adjustable lower and upper tolerance values. It has already been proposed to regulate the welding energy by varying the power time or welding time. Now, during the welding operation, particularly the power trend ($P(t)$) or the energy ($\int P(t)dt$) determinable from this are compared in segments by reference to a predetermined desired curve for correspondence to tolerance ranges which can be predetermined differently from segment to segment. In the associated apparatus, the switching units assigned to the ultrasonic generator have at least threshold elements or comparators; their function can also be performed in software terms by an existing microprocessor system. By means of the processor system proposed, the quality control in

ultrasonic welding can be improved.



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